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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,213	09/09/2003	Tadashi Kobayashi	242033US3 DIV	9104

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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CASAREGOLA, LOUIS J

ART UNIT	PAPER NUMBER
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3746

DATE MAILED: 05/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/657,213

Applicant(s)

KOBAYASHI ET AL.

Examiner

Louis J. Casaregola

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 5/12/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Election***

Applicants' election of the species of Figure 21 and corresponding claims 1-4 is acknowledged. The election was made with traverse. Since applicants have canceled all of non-elected claims 5-27, however, the traverse is considered moot. An action on the merits of elected claims 1-4 is set forth herein below.

***Claim Rejections - 35 USC § 102***

Claim 1 is rejected under 35 USC § 102(b) as being anticipated by either Anxionnaz et al or Stuart.

Claim 1 reads on conventional gas turbine engines with fuel coolers of the type disclosed by either of the above cited references. Attention is called to Figure 3 of Anxionnaz; note air compressor C1 and C2, combustor B, turbine t, fuel system R, C3, etc., and heat exchanger r for transferring heat from compressed air to fuel. Note also that the claimed "driven equipment" is sufficiently broad to read on any power extraction device including Anxionnaz's thrust nozzle T.

Attention is further called to Figure 1 of Stuart; note air compressor 18, combustor 32, turbine 38, fuel system 34, 76, etc., and heat exchanger 50 for transferring heat between compressed air and fuel. In this case, the "driven equipment" reads on the fan assembly described in the paragraph bridging columns 3 and 4.

Claim 2 is rejected under 35 USC § 102(b) as being anticipated by Anxionnaz et al as discussed above and with further comment. Note that Anxionnaz's heat exchanger is housed within his air compressor section.

***Claim Rejections - 35 USC § 103***

Claim 3 rejected under 35 USC § 103(a) as being unpatentable over Stuart.

Stuart's heat exchanger 50 is shown only in rough schematic form and without mechanical details. For structural integrity, unit 50 must however be provided with some type of mounting arrangement, and since this unit is located immediately outside of the casing of compressor 18, it would have been logical and obvious to attach or mount unit 50 on the compressor casing.


***Allowable Subject Matter***

Claim 4 contains allowable subject matter but is objected as depending from a rejected parent claim. If rewritten in independent form, claim 4 will be allowed.

***Additional References***

Wakeman is cited as disclosing a further pertinent example of a gas turbine engine with a fuel heating system; see element 30 in Figure 1.

L. J. Casaregola  
571-272-4826 (M-F; 7:30-4:00)  
703-872-9306 FAX  
May 23, 2005

  
**LOUIS J. CASAREGOLA**  
**PRIMARY EXAMINER**

If repeated attempts to reach the examiner by telephone are unsuccessful, the art unit supervisor, Timothy Thorpe, can be reached at 571-272-4444.

Information regarding the status of this application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR, and status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).